YETI3D ++ (BennuGD port)

Yeti3d Engine (c) Derek John Evans

Bennugd (c) Jose Luis Cebrian, Fenix Team, SplinterGU.

Downloads, Updates, codes, tutorials in:

http://code.google.com/p/yeti3dplusplus/

Yeti3d - File Formats:

Maps (.y3d)

Sprites(.o3d)

Models(.Bin)

Textures/Palette(.raw/.pal)

Note: Please use included converters to use this formats..!!! (EXE DIRECTORY)

Tutorials from converters is included in PDF format.

Update: 26/11/2012

Functions

CORE

intYETI_INIT(TYPE_ENTITY_3DcameraEntityVar, stringpathMapfile)

Initialize a 3d engine, return zero if error

YETI_FREE()

Terminate engine and free memory

intYETI_LOADTEXTUREFPG(intfileFPG, intgraphId)

load a bennufpg textures, return zero if error

intYETI_LOADSPRITEFPG(intfileFPG, intgraphId)

load a bennu SPRITE 3D, return zero if error

YETI_SETRENDERGRAPH(intfileFPG, intGraphID)

Set a render graph in bennu

intYETI_LOADTEXTURE(stringtexturePath, stringPalettePath)

Load textures and palette ,Returns zero if error.

Created with Texture Editor available in tools directory

YETI_SETRENDERFX(intidEffect)

Set a postprocess effect. See “yeti3d.h” for more info.

YETI_SETVISUAL(intYETI_RAY_WIDTH,intYETI_RAY_MAX,intYETI_CELL_MAX)

Set render params to improve performance/render quality.

YETI_SETSKY (intidsprite)

Set a sky.

ENTITIES AND PROPERTIES

YETI_LOADSPRITE(stringFilePath)

Load a sprite data file.

YETI_ADDSPRITE(intSpriteID, TYPE_ENTITY_3DEntityVar)

Add a billboard(3D Sprite) entity.

intYETI_ADDMODEL(intfileIDmodel, TYPE_ENTITY_3DmodelEntityVar)

Load a 3d polygon model, and assign to var. return zero if error.

YETI_MODELANIM(TYPE_ENTITY_3D Entity, intstart,int length, int speed, intloops)

Set 3d model animation. For loops see “yeti3d.h” .

YETI_SPRITEANIM (TYPE_ENTITY_3D Entity, intstart,int length, int speed, intloops)

Set sprite animation. For loops see “yeti3d.h” .

YETI_ENTITY_SETVISUAL(TYPE_ENTITY_3D entity, int width, int height, intdrawmode)

Set visual data (draw params). To Drawmodeparams see “yeti3d.h”.

YETI_ENTITY_GETVISUAL(TYPE_ENTITY_3D entity, int pointer width, int pointer height, int pointer drawmode)

Get visual data (draw params).

YETI_ENTITY_DATA(TYPE_ENTITY_3D Entity, intentitydata,inttype_entity)

Set entity data, too change sprite to model and viceversa, or only change entity data.

By example: YETI_ENTITY_DATA(&ent,filemodel, TYPE_MODEL3D);

Int YETI_ENTITY_IS_VISIBLE (TYPE_ENTITY_3D entity)

Return true if entity is visible by camera.

Int YETI_ENTITY_IN_GROUND (TYPE_ENTITY_3D entity)

Return true if entity in ground.

intYETI_ENTITY_LINE_OF_SIGHT(TYPE_ENTITY_3D Entity1,TYPE_ENTITY_3D Entity2)

Returns TRUE if two entities have a line of sight.

YETI_ENTITY_LOOK_AT(TYPE_ENTITY_3D Entity, int x, int y, int z)

Setup a entities turn and pitch so it points towards a given point. (Doesn't use a sqrt)

YETI_ENTITY_LOOK_AT2(TYPE_ENTITY_3D Entity, int x, int y, int z)

Setup a entities turn and pitch so it points towards a given point.

YETI_ENTITY_FREEZE(TYPE_ENTITY_3D Entity)

Stop motion in a entity. Zeros all entity velocities. Used for pain & death AI.

YETI_ENTITY_FRICTION(TYPE_ENTITY_3D Entity, int amount)

Set friction.

YETI_ENTITY_MOVE_FORWARD(TYPE_ENTITY_3D Entity)

Move forward a entity.

YETI_ENTITY_MOVE_BACKWARDS(TYPE_ENTITY_3D Entity)

Move backwards a entity.

YETI_ENTITY_TURN_RIGHT(TYPE_ENTITY_3D Entity)

Turn right a entity.

YETI_ENTITY_TURN_LEFT(TYPE_ENTITY_3D Entity)

Turn left a entity.

YETI_ENTITY_MOVE_LEFT(TYPE_ENTITY_3D Entity)

Move left a entity.

YETI_ENTITY_MOVE_RIGHT(TYPE_ENTITY_3D Entity)

Move right a entity.

YETI_ENTITY_TURN_TOWARDS(TYPE_ENTITY_3D Entity, int x, int y)

Turn towards a given point.

YETI_ENTITY_SET_VELOCITY(TYPE_ENTITY_3D Entity)

Setup a entities velocity based on its turn & pitch.

YETI_ENTITY_FORCE_TOWARDS(TYPE_ENTITY_3D Entity, intx, inty, intz, intshift)

Force towards a given point.

YETI_ENTITY_DEFAULT(TYPE_ENTITY_3D Entity, intisjumping,intiscrawling, intxyfriction)

Smooth entity motion, and height fixes.

COLLISIONS

YETI_ENTITY_COLLISION (TYPE_ENTITY_3D Entity, intenable,intCollisionId, intCollisionWithId)

Enable collision with walls and entities. Used with (DetectedCollisionWithEntity, DetectedCollisionWithWall) entity vars.

YETI_ENTITY_MSG (intyeti_entity_pointer,intmsg)

Send message to yeti entity. Used with *CollisionWithEntity* entity Var.

By example: if (ent. DetectedCollisionWithEntity) YETI_ENTITY_MSG(ent. Detected CollisionWithEntity, 100); end;

CELLS (WALLS)

intYETI_LOADMAP (stringfilePath)

Load a map file.

intYETI_SAVEMAP (stringfilePath)

Save a current map file .

YETI_GETCELL(int x, int y, TYPE_CELL_3D cell)

Get a cell information.(Walls)

YETI_SETCELL(TYPE_CELL_3D cell)

Set a cell information. (update a modified Wall)

YETI_GETCELLFROMID (int IDCell , TYPE_CELL_3D cell)

Get a cell information since a ID obtained with Collisions. (Wall)

intYETI_CELLBOT(TYPE_CELL_3D cell, TYPE_ENTITY_3D Entity)

Get bottom data, compare with entity.

intYETI_CELLTOP(TYPE_CELL_3D cell, TYPE_ENTITY_3D Entity)

Get top data, compare with entity.

intYETI_LOADFILE(stringfilePath)

Load a disk file, returns a file ID. Returns zero if error.

intYETI_FIXCOS(int value)

returns a fixed cosine.

intYETI_FIXSIN(int value)

returns a fixed sine.

IntYETI_FIXANGLE(int x, int y)

Return a fix angle

IntYETI_FIXARCTAN(int y, int x)

Returns an approximate arctan2 angle. Angles are 0..2048 = 0..360 degrees.

IntYETI_FIXSQRT(int value)

Return a Integer square root.

intYETI_ANSIC_FRICTION(inta, int b)

return ansic friction.

BULLETS

YETI_BULLETSHOOT (TYPE_ENTITY_3D Entity, intspriteid,intCollisionId, intCollisionWithId)

Shoot bullet from entity.

RENDER

YETI_RENDER ()

Render and update all entities – please set YETI_AUTO_RENDER=false;

YETI_DRAW ()

Render and update only camera - more fast, usefull for split screen games, please set YETI_AUTO_RENDER=false;

GLOBAL VARS

Int YETI_AUTO_RENDER - enable render engine

Int YETI_BULLET_WIDTH - bullet sprite width

Int YETI_BULLET_HEIGHT - bullet sprite height

Int YETI_BULLET_DRAWMODE - bullet sprite drawmode

Int YETI_BULLET_Z - bullet z var

Int YETI_BULLET_RADIUS - bullet radius

Int YETI_SCREEN_WIDTH - Max Screen width

IntYETI_SCREEN_HEIGHT - Max Screen Height

Resources

MD2 Models

http://code.google.com/p/otherfenixbennuprojects/downloads/list

http://www.md2.sitters-electronics.nl/models.html

External Tools:

Particle generator

Particle illusion

http://www.wondertouch.com/

After effects

www.adobe.com/es/products/**aftereffects**.html

Texture creator

Texture maker

http://www.i-tex.de/

Model Editors/Converters (MD2 - quake2 model)

Blender (MD2 exporter script)

http://www.blender.org/

Misfit

http://www.misfitcode.com/misfitmodel3d/

Quark Army Knife

http://quark.sourceforge.net/

Fragmotion

http://www.fragmosoft.com/

Milkshape

http://chumbalum.swissquake.ch/

Deep exploration

http://www.righthemisphere.com/products/dexp/

Port Thanks to…

Derek John Evans

ThunderZ

SOD_THOR

SplinterGU

GECA soft

FreeYourMind,

Josebita

Prg

Bennugd Community

Coldev- Team